

TOIKE S OIKE

TOIKE OIKE, TOIKE OIKE, OLLUM TE CHOLLUM TE CHAY
SCHOOL OF SCIENCE, SCHOOL OF SCIENCE, HURRAY, HURRAY, HURRAY

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CANNON CAPERS NOV. 26

STUDENT CONFERENCE QUEBEC, 1954

Through the generosity of the Engineering Institute of Canada, and the U. of T. Engineering Society, the President of the Society was able to attend, as a student delegate, the Annual Convention of the Institute in Quebec City this past May. Student delegates from the twelve engineering degree-granting universities in Canada were present, not only at the Convention itself, but also at a Student Conference held just before the Convention to discuss matters common to all engineering student bodies.

The resolutions of this Student's Conference have been summarized elsewhere in this copy of Toike Oike, and are included, along with the minutes of the Conference in the October, 1954, issue of the "Engineering Journal."

As might be expected, the E.I.C. hopes to convince those students present that the Institute is a worthwhile body to join. With so many engineering organizations on the campus at Toronto, it is difficult to assess the value of the E.I.C., but perhaps some of the following points might show its advantages:

- (1) The E.I.C. is the only national body of Engineers embracing all the branches of the profession.
- (2) The E.I.C. represents over 16,000 Engineers.
- (3) Membership entitles a student not only to the privileges of the national body, but also of the local branch in which the student resides. This includes the right of attending the branch dinners, meetings, and social functions.
- (4) As a member of the E.I.C., the student receives a monthly copy of the "Engineering Journal," the official publication of the Institute.

The choice of joining this organization rests with each of you. It might be sufficient to add that the following statement was heard at the convention from such men as the President of one of Canada's largest construction firms,

Engineering Christmas Party

Last year during the mid-part of December, the Engineering Society in co-operation with the University Settlement, sponsored a Christmas party in Hart House for underprivileged boys.

Every year the Settlement throws a party for the children of those people living directly south of the campus. Last year when Settlement officials found they were unable to handle the large number of kids, the 12-14 age group was dropped from the program. The Engineering Society Executive heard about these unfortunate circumstances and volunteered seventy-five dollars (\$75.00) towards throwing a "smash" for these youngsters.

Members of the Executive were on hand at Hart House to receive over 100 boys in the Lunch Room where the boys left their coats. The youngsters were given a choice of swimming or basketball. At five o'clock they were rounded up and escorted to the Fencing Room where an Engineering student displayed good talent as a magician to the amusement of all concerned. (Ivan Finnian). This demonstration was followed by movies. The party ended up at six

o'clock in the Great Hall where the boys had tables reserved near the Blue and White Christmas Tree. Presents bought by the Engineering Society consisted of bags of candy which were distributed as the boys left.

University Settlement officials congratulated the Engineering Society on their goodwill shown in this matter.

This year a similar event was planned but the heavy fine forced many events to be cut from the Budget and Engineering Christmas Party was one of them.

Our Faculty Council is in favour of

having this event. Your elected members of the Engineering Society Executive are in approval. Whether these kids have a party or not to give them something to remember Christmas by is up to you Skulemen. You are 1800 strong. What is asked of you is a personal contribution of the price of a coffee. Everyone around this campus is aware of the benevolence of Skulemen towards charity. When the collection is taken up your Executive hopes you will come through. Ten cents per person is what is expected of you, and your reward is the satisfaction that a group of neglected kids will have a Christmas Party.

Place: Hart House

Time: Friday, November 26, 9 p.m. to 1 a.m.

Music: Excellent.

The equivalent of last year's Engineers Ball, the Cannon Capers, will be held in Hart House this year on November the twenty-sixth. Dancing will be from nine to one, with music being provided by three fine orchestras. Frank Bogart's group will be featured, while Ken Dean will dispense with the finest of Dixieland. For those in search of quiet and more sentimental music, a "mood-music" quartet will be there too.

In an all-out effort to make the Cannon Capers a dance long to be remembered, the organization committee has been working overtime during the past few weeks. Beautiful decorations have been made, programs have been printed, favours for everyone attending have been bought, and even more important, first class entertainment. The exact nature of this entertainment is a closely guarded secret, but judging from what little information is available, it should be really sensational.

The feature of the dance will be the appearance of our most treasured and sought-after possession, the Skule Cannon. Not only will the cannon be there, but its long and lively history will be re-enacted for everyone to see.

So, Skulemen, for a real ball—the Ball of the Fall—get yourself a real doll and come to the Cannon Capers on November 26. That's a Friday night, and what a Friday night that will turn out to be. See you all there.

Engineering Society Meeting

Engineering Society Meeting, 5 p.m., Tuesday, November the 9th. The Bickersteth Room, 3rd Floor of Hart House.

Business arising from the minutes brought up the point of the activity of the Freshman Reception Committee which is supposed to look into feasible schemes for freshman initiation next year. They had not yet met to discuss these problems but were scheduling a meeting in the near future.

Correspondence item concerned mainly the dances being held on the campus by the other faculty governments and to which the Engineering Society usually sends a representative. Some invitations had gone unanswered and the President asked that those interested in attending such functions keep a close eye on the notice board.

As soon as the correspondence was covered the President took the opportunity to make a few comments regarding the constitution (which, theoretically at least, does not belong to this body of students having been withdrawn nearly four weeks ago).

He clarified the position of the Editor of the Toike Oike by reading the section of the constitution which forbade the Editor to vote or make motions. The validity of the motions which the Editor has made so far this fall and those which he has voted on was not discussed.

The President then read the section which named the book of Rules of Order which is officially used by the Society. It is common knowledge that the Society does not own one of these books.

Mr. Rossall then read the section which allowed for the Rules of Order to be dispensed with if the rules of the Society deemed it necessary. This left many members in a quandary as to when the Rules applied and when they did not. But no questions were raised about this point so apparently it is at the discretion of the Chairman. Past observations support this assumption.

Mr. Hurlburt reported from the SAC and also from NFCUS. He said that there would be a meeting held shortly after this meeting at which the question of NFCUS membership would not come up.

Mr. Deeks reported on Skule-Nite and, in passing mentioned that 343 men had attended the School Dinner at Quebec City. The conference lasted

three days and the following resolutions were passed by the student delegates:

1. Request that national headquarters of the E.I.C. appoint a co-ordinator who will urge the local branches to make available suitable counsellors through local liaison.
2. That each delegate to the conference be responsible for mailing any Society publications to all other undergraduate Societies.
3. That immediate steps be taken to have university student fees made deductible from taxable income.
4. That the E.I.C. be requested to continue distributing one free copy of the Journal to all students in one undergraduate year in order to stimulate interest in the E.I.C.
5. That in order to create a better understanding between Canadian cultures, the Conference recommends to the E.I.C. that more French language papers be published in the Journal.

A discussion of the third resolution followed and a motion by Mr. Deeks and Mr. Shielis to take responsibility for, and support thoroughly, any movement for the deduction of student fees from the income tax of either the person claiming the student as a dependent or the student.

After the meeting returned from supper in the Great Hall there was not a quorum but discussion on various topics followed anyway.

Mr. Harrison announced that the next General Meeting of Engineering Society was scheduled for December the 2nd.

Mr. Subock announced that the Industrial Chemical Club would like to have its name changed from that to the Chemical Engineering Club.

The President then took the opportunity to report on the forthcoming School Auction. He said that it would not be abolished unless the Caput of the Faculty Council ruled it out. On the other hand, the discontinuance of the Settlement Christmas Party disappointed the Faculty and they suggested that the lectures be canvassed for funds to hold the party. Mr. Marks volunteered write an article on the Christmas party to be published in the Toike Oike.

The meeting then adjourned with the announcement that the next meeting would be held in Hart House in two weeks time.

ARE YOU PREPARED?

By DICK McLACHLAN

Has the average graduate engineer the preparation required to enter industry, and be worthy of his degree?

Has he had the opportunity for adequate preparation through the university?

Does his passing exams give him the right to feel prepared?

Whose fault is it if he is not prepared?

(a) His (b) Industry's (c) or the university's?

The engineer loses because he is not prepared to carry out the function required of him by the firm. Many young engineers are disliked by people who must co-operate with them because they are put in a position where their administrative authority is not backed up by the kind of technical knowledge that can only be gained through experience.

The firm loses because engineers are in high demand and the company must pay high wages to a graduate while he undergoes an extensive training program.

For both these preceding reasons a bad taste would reflect back on the university.

It would be advisable for larger companies to send their personnel men to the university to interview the freshmen, offering summer training programs and possibilities for jobs after graduation. It would be much less expensive to train, or lose, an undergraduate trainee than a graduate one. The student's incentive would increase and the failure rate would probably drop.

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EDITORIAL



Which One Is You?

The following three sentences are quoted from "A Helluva Shortage of Engineers"—Fortune Magazine, September, 1951. ". . . But, as engineers soon found out, the organization of professional societies did not automatically create a profession. The learned professions were three, divinity, law and medicine—and their prerogatives and class distinctions had been jealously guarded for centuries. The man of verbal accomplishments, though he might preach or utter nonsense, had no difficulty in feeling superior to the rising upstart who designed bridges. . . ."

Yes, we are quite ready to agree that dress does not make medicine or engineering a profession. But we are just as sure that proper dress does help.

However, as this editorial is not biased, the other side of the dress problem is presented.

It seems unfortunate that members of all the other colleges and faculties on the campus have to dress up to attend lectures and thus show up. But perhaps we can point out the "error of their ways," and convince them to adopt our standards.

Of course this would be easy to do because everyone knows the advantage of being sloppy.

Why certainly—it is just the easy way!

ELM GRILL



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COLLEGE ST.

But Those Labs—

If it were done when 'tis done, then 'twere well it were done quickly; if the acting hereof could trammel up the final exam, and catch, with a B, or pass, that but this cheating might be the be-all and the end-all here. But here, cooking this report and handing it in, well foul up the tests to come. But in these cases, we still have a necessity here, even though in completing these reports, the leaching hereof returns to plague the inventor. Such heavy-handed justice commands our own fate to us in April. We have a double trust: First, as we need the marks, and dare not be late, strong for the deed; but then again, as a student who should learn whatof he writes, rather than just copy.

Besides, this report seemeth not so tough, so rugged in formulae, that a few more hours thereon might not find the solution. And knowledge like a mighty shining sword, cleaving the depths, or like the wonderful gen, piling clue on clue, shall blow the horrible ignorance from my soul, that honest marks I mine. But I have no spur to prick the sides of my intent, only stunted ignorance, which will o'erleap my conscience, and fall on last year's report.

—By Vance.

HOUSE HART

The Second Floor

The Debates Room is empty and yet the brown bag carriers still like to sit on the hard, cold, marble steps in the basement of the House. If they only knew what they were missing! An easy chair, a table on which to put your lunch and Varsity, sunlight, large open spaces, attractive surroundings and no one is crawling over your head every half a minute trying to get up or down stairs. All this you can have if you—and this is pretty difficult—walk up two flights of stairs.

For some very odd reason the second floor of Hart House has always been discriminated against. No one likes to go up there. And it is constantly providing complications—this irrational aversion for the second floor. Events like the sing-song, the weekly movies, the Wednesday concert would all be much better off being held in the Debates Room or the Music Room but for the fact that they might go unattended because they were "so remote" from the average members who can't be bothered to walk up stairs.

Then the East Common Room would be set up as a Common room permanently and you would not be frustrated for a seat every time you went there and found a sing-song, a movie or a concert in progress.

Odd that men should frustrate their own desires, isn't it?

Concerts

The concerts that the Music Committee is constantly serving up for the members of the House are worth the cost of membership alone. The early bird sits within a few feet of the artists (which is at times a little frightening) and is not hampered by reserved seat requirements, a buck or two to shell out for a decent seat and a tedious trip down town to the Royal Ale or Massey Hall. The Engineering Stores has tickets for the Sunday Evening Concerts during the week previous to the concerts and these are available for any member of the House, i.e. any Engineering undergrad. They cost you nothing directly and provide a wonderful soothing effect before you start back Monday morn to five days of slide ruling and result cooking.

Other Music?

The little red school house, long recognized as the root of all true barber shopping, will doubtless be interested to know that sometime around the end of November the House Committee will be calling for entries to the All Varsity Quartet Contest. Nobody (well, hardly anybody) can recall the year when this contest was won by non-schoolmen.

And Noise?

The Seeling in the Arbor Room has been toned down considerably in order to maintain the restful atmosphere that room was created to provide. It is the hope of the committees and staff of the House that if the thing is still disturbing some people that they will not be hesitant in coming forward and voicing their complaints. It's there to provide enjoyment for the members and their friends; not to make money for the House.

Engineering Society

Your elected representatives have started to use the House for their bi-weekly meetings. A meeting on the 9th of November was held on the third floor in the Bickersteth Room

CLUB NEWS

PHYSICS CLUB

The annual Tea Party of the Engineering Physics Club was held on November 10 in the intellectual atmosphere of one of Toronto's most luxurious tea gardens. This small gathering of gentlemen from the aristocrat of engineering courses was amazed by Dr. Slocombe's demonstration lecture on yoga, nail holes, gravitation, and life in Montreal. Later in the evening, while an active discussion on probability went on in one corner, several gentlemen in rather a light mood for such a serious occasion gathered around the harpsichord and harmonized an early English ballad of a curious nature. In a competition requiring extreme concentration our first year representative master Peter made such a valiant attempt that, by almost unanimous request, he was awarded a large tea cup bearing the faculty crest. It is to be hoped that those present were sufficiently interested in the proceedings to have carried something home with them. Pip. Pip. Tea anyone?

AERO CLUB

Executive

Chairman . . . J. R. MacLeod
Vice-Chairman . . . D. G. McGregor
Sec.-Treasurer . . . R. D. Cockfield
4th Year Rep. . . . K. A. Kinsman
3rd Year Rep. . . . D. F. Black
2nd Year Rep. . . . R. L. Warwick
1st Year Rep. . . . G. M. Smith
The Aero Club has planned a full year of activities including speakers, movies, field trips and the annual banquet. An invitation is extended to all those interested in aviation whether they are in Aeronautical or not.

INDUSTRIAL PSYCHOLOGY

By JIM STEVENS

Psychology is the study of the mind. Industrial Psychology concerns itself with the human factor through out industry—industry being construed here in its widest sense to include all occupations, whether in the factory or in the office. Since the actions of the mind cannot be photographed, a man's thoughts and feelings must be interpreted by his actions.

How a person thinks can be guessed with some reasonableness if he behaves in the same way in the same circumstances. If the variables of the situation can be controlled, the determining variable may be identified. This is the "experimental crisis" in psychology as in the physical sciences.

The aims of Industrial Psychology are to discover the best possible human conditions in occupational work, whether they relate to the best choice of a vocation, the selection of the most suitable workers, the most effective means of avoiding fatigue and boredom, the study and provisions of the most valuable incentives to work, the causes and the remedies for irritation, discontent and unrest, the best methods of working and training, the reduction of needless effort and strain due to bad movements and postures, inadequate illumination, ventilation and temperature, or defective routing, layout, or organization. Thus it is obvious from the above that Industrial Psychology includes physical health in so far as it is impossible to separate mental from bodily activities in their interrelation and inter-action.

This does not mean that a primary aim of the industrial psychologist is to get greater output by improving on the above factors, but is mainly concerned with giving the worker greater ease. Production will vary directly with worker-ease in many cases.

Let us now consider an example which shows the "Mechanical" outlook in which the human factor is ignored.

Girls were employed filling small tins with liquid which they afterwards covered and returned to the Inspection Department. The management decided that the fetching and carrying of tins was a waste of time and they subsequently introduced younger girls for this work. They also introduced still further specialization by allocating to separate groups of girls the work of filling, covering and labelling—on the principle that, each girl having to carry out fewer, more easily-learned movements more frequently, output would increase. Output did increase but only for a short time. The deadly monotony of the work and the strain of attending to a few simple operations and of repressing other forms of activity ultimately reduced output to below its original level.

The objection is sometimes put forward—how can Industrial Psychology benefit the worker if, by its aid,

On 27th October the club heard Mr. Dick Hiscocks of De Havilland speak on the subject of bush aircraft. He traced the history of flying in Canada and recounted some of the near-legends of early pilots and aircraft. The need for a distinctly "bush" aircraft lead to the production of the DH Beaver. Now more than 600 Beavers and Otters are in use from one end of the earth to the other. Following a question period, a movie entitled "Test Pilot" was shown, after which the meeting adjourned to the Great Hall for refreshments.

An interesting speaker will be obtained for the November meeting, while in December the club plans a trip to AVRO at Malton.

Student Conference . . .

(Continued from page 1)

papers have since been reprinted in the Engineering Journal and are worth the time it takes to read them. But not all the convention was business! A boat trip up the St. Lawrence, a tour of the Davie Shipyard in Lauzon, Quebec, a visit to Les Voutes de Jean Talon (courtesy of Dow), the banquet at which the students were the head table guests, all made the convention more pleasant.

Next May, Toronto is the site of the E.I.C. Convention and this means that our Engineering Society will be the host to the student delegates. By joining the E.I.C. this year, you will be entitled to attend the discussions, the papers, the banquets. You stand to benefit by meeting the men you will be working with for the rest of your life. Think this matter over, for student memberships to E.I.C. are now on sale at the Stores.

INDUSTRIAL PSYCHOLOGY

By JIM STEVENS

as he produces more work per unit of time, still more work is heaped upon him by the management? Even if he gains in earnings how does he gain in ease at his work? The answer to this question is that as we have said before, the aim of the Industrial Psychologist is primarily not to obtain greater output but to give the worker greater ease at his work. Ease does not mean merely physical ease but also mental ease. If all causes of mental friction—irritability, annoyance, anxiety and the like—are reduced, the worker will be all the happier even if he has to work as hard as before. Industrial Psychology is always concerned in safeguarding the worker from over-fatigue. But in by far the greater number of cases, over-fatigue results not directly from over action but from worry, resentment, suspicion, etc. Remove these, increase interest, improve the general mental "atmosphere" and complaints of overstrain will mostly vanish.

Since the industrial revolution, urbanization has complicated living. Complexity can be good as well as bad. Actually the psychologist is wary of value words like good and bad, yet, he knows that some "values" are widely held," values such as health, peace and love. He believes psychology helps understand the roots of such values and has a duty to contribute as it can to their realization.

Collar, Tie Now a Must at Ryerson

Male students attending classes at Ryerson Institute of Technology will be required to wear a collar and a tie in future.

Principal H. H. Kerr said today the 95 per cent. of the students who dress properly complained about others who appeared at classes wearing jeans, slacks, T-shirts and the like.

Industrial chemistry instructor, Dr. W. G. Hinds, was the first to issue an edict outlawing casual dressers.

Patronize

YOUR

School Stores

FORUM

How Valuable Is Post Graduate Work To An Engineer?

Post Graduate Work

One of the most perplexing problems facing the student on the day of his graduation from the course of his choice is whether he should immediately seek a position in industry, or whether he should continue to further his formal education by embarking on a post graduate University course. Advanced courses on instruction and facilities for research are available to graduates of the Faculty of Applied Science and Engineering, both at the University of Toronto and at other Universities in Canada and abroad. Generally speaking, a Doctor's degree takes several years of original research work and study, while a Master's degree can be earned in as little as one year.

The question naturally arises "of what value is a post graduate University course to an Engineer?" It is obvious that good positions can be obtained with only a bachelors degree, and that few positions specifically ask for a Doctor's or Master's degree. On the other hand, many of our top engineering executives do possess such a degree. In an effort to find an answer to the above question, Toike Oike has asked several well known professors and important industrial executives to state their views on this important and timely subject. It is hoped that their answers appearing below will prove of help to fourth year students, and of general interest to all others.

A Guide

While the young engineering graduate will admit that he is only partly educated for his profession, his path ahead is not too clear. There are a variety of methods open to him: post-graduate work at the University, a graduate training program in industry, part time courses, independent study, and so on. Each individual will have to seek out his own best solution.

As a guide however, I feel that in the fields of teaching and research advanced degrees are an absolute necessity. They are helpful in the areas of advance and development engineering or industrial research. Their value is doubtful in the realm of sales, design engineering and manufacturing.

In general it is better, if the decision is made to take a post-graduate degree, to begin immediately upon graduation, although in some instances, notably degrees' in management, it may be better to postpone them until a certain amount of experience is gained.

W. F. McMULLEN (B.A.Sc.), Manager—Technical Personnel, Engineering Services Dept., Canadian General Electric Co. Ltd.

(Editor's Note—Mr. McMullen interviews hundreds of graduates at various Universities every year).

Not Immediately After Graduation

Post graduate work means little to an engineer if it is undertaken (a) to merely obtain a master's degree or other degree, or (b) before sufficient practical experience has been obtained after graduation.

Such further training combined with the practical experience mentioned, may and should enable the engineer to tackle his problems with greater confidence and understanding of the many factors involved in any and every engineering project, be it large or small.

It is not possible even in four years of study towards graduation as an engineer for all the aspects of engineering to be taught and studied to the extent required in actual practice. It is only possible after some time has been spent in actual practice, for the engineer to decide whether further study is required and to determine in just what field this further study should be undertaken.

The obtaining of a master's degree is only incidental to such further study.

There is no substitute for the practical application of engineering knowledge. However, if such application can be enhanced and enlarged by further study and research under proper circumstances and guidance, then, and then only, will post graduate work be of value to an engineer.

C. T. SHARPE (B.A.Sc.), S.P.S. 1924, Civil Vice-President, Canada Printing Ink Co. Ltd.

Helps To Give Intellectual Flexibility

The answer to this question varies with the age, objectives and financial circumstances of the engineer. Post-graduate work is essential for any engineer who wishes to practice in teaching or research. It is the real fifth year, because it fills in gaps that are bound to exist in undergraduate curricula and enables the student to specialize in a particular field. It also gives him experience in handling a new problem by himself, of designing and providing the necessary facilities and of working logically along a preferred path to a definite conclusion. It is also advantageous to many of the engineers who propose to enter industry because it helps to give them the intellectual flexibility that is of great assistance when dealing with management or technical problems. I write from personal experience, having taken two years of post-graduate work before entering the industrial field. That experience was invaluable to me.

E. A. ALLCUT, Professor of Mechanical Engineering.

Definitely Helpful

I know of two advantages that can be claimed for post graduate work for Engineers.

1 It Demonstrates Desirable Qualities:

One important criterion in the selection of employees is evidence of ability to perform. It requires considerable self-discipline to forego for another 12 months or more, the pleasures of a salary in order to obtain a second degree. Extra initiative and persistence are required to successfully complete a major thesis on original work. Some employers realize that many post graduate students possess these extra qualities and are therefore more desirable than engineers who have only one degree.

2. Special Training Can Help Land a Special Job

This was true in my case where I knew of a technical sales position and chose my post graduate work accordingly. In general, post graduate work in engineering is advantageous only for positions in engineering design and research.

Courses or degrees in Business Administration can be very helpful to engineers in industrial sales and management. If more than one year full time is required, most students prefer to obtain a Master of Commerce degree by night courses.

The achievement of a second degree is a difficult process. I recommended it only to those who can foresee benefits from it and can make the necessary sacrifices.

G. W. PROUNIER (M.A.Sc.), Manager—Industrial Sales, Apparatus Division, Canadian General Electric Co. Ltd.

Of Definite Value

I can speak from personal experience regarding the value of post-graduate studies to the engineer. If it is at all possible for him to do so, financially or otherwise, at least a year of such work, will pay dividends later on. The graduate work need not be wholly confined to technical studies. The engineering curriculum still lacks those cultural subjects which are crowded out because no time is available for them. The broader outlook required to solve the complicated problems, non-technical in nature, but associated with engineering projects, can best be secured by a broadening of the base of the engineer's training. Human relations, for example, play a very important part in getting things done, including engineering projects. The subject has been given intensive study, and much has been written on various aspects and their effect on production. Sooner or later, the engineer is confronted with some situation of this kind and finds that his slide rule and text book cannot provide the answer. The engineer may find the answer in the hard way, by experience, sad or otherwise, but this is a slow and painful process. Industry has found that the scientific approach can often be applied to solve even these abstruse problems. What better place is there than the university to study and discover the fundamentals of these problems. The average undergraduate knows nothing of them, and little or no effort is made to indicate to him that such problems exist in industrial undertakings. There is no time. Graduate study could very profitably fill this gap, with more advantage, I believe, than a continuation of advanced technical study, except perhaps in special cases.

G. D. FLOYD,
Deputy Assistant General Mgr.,
Engineering, Ontario Hydro.
Vice-President, Canadian District
AIEE.

Could Be Wasted on He Who Learns By Doing

This question is much too broad to allow for a simple answer unless it be one of a similar general nature. Any amount of education in any field is helpful in fitting the individual to find his most useful place in our society; the greater the amount, the more help will be provided. One might ask "how valuable is the fourth year of an undergraduate course, or the third year or the second or the first and is there a diminishing return or an increasing value as the educational program progresses?"

The prospective candidates for post graduate work are individuals of varied characteristics, abilities and desires. Some derive a lot of help from a formal educational process while others learn best by experience or "on-the-job" training. Some know the areas they want while others are still searching for a field of endeavour in which they will find satisfaction. It follows that the value of post graduate work depends on the individual. If he is a good "student" and has a definite goal, the University facilities and the association with like minded people cannot fail to be of enormous value in his development. If he learns better by "doing" and has no well defined objective, the time spent on post graduate work could be completely wasted.

Some post graduate studies involve continuing work in the areas already covered in undergraduate courses. For the engineers who wish to pursue highly technical work, further study of this kind can be very helpful. Other post graduate studies branch out into complementary fields which could not be covered in the undergraduate course, because of the limitations of time. Many engineers join industrial firms and are expected to move up to management ranks. While their undergraduate course provides good training, some further study in Business Administration would help them in the understanding of the problems in the broader field of their chosen vocation.

PROF. T. C. GRAHAM,
Director,
School Business Administration.

Essential For a Person With the Capacity

This is not too easy a question to answer since so much depends upon the individual. Today, it is the opinion of many that the modern engineering course should extend over five years and that the additional time spent in advanced study for the master's degree actually constitutes the necessary fifth year. However, if a man's decision to take continued studies stems from the thought that a few more letters placed after his name will command a better salary or make him more useful, at once, to an industrial employer, then I would urge him to forget the idea. The motivation is poor and the policy a shortsighted one, sacrificing, as it does, a more distant potentiality, albeit somewhat idealistic, for an immediacy. Such a man would be better advised to get out, now, and go to work in the field of his choice and thus gain valuable practical experience. Later, perhaps, with more knowledge and a better perspective, he might undertake post-graduate work to advantage.

On the other hand, for a person of vision and having the capacity to absorb advanced study, the four years of college, dealing only with the basic sciences of engineering, are not sufficient. If he has the desire and ability to make contributions at the professional level, his continued progress can only come from additional study. For this man post-graduate work is essential.

W. L. SAGAR,
Professor of Civil Engineering.

Post Grads Needed Due To Changing Situation

The factors which determine whether or not a student in Chemical Engineering should proceed to post-graduate work leading to a higher degree may be listed as: (a) intellectual curiosity regarding the scientific fundamentals, (b) willingness to postpone maximum earning capacity, and (c) type of job in which the student hopes to make his career. It is also obvious that a good undergraduate academic record is a necessary qualification, but it is not necessarily true that the brilliant undergraduate makes the best graduate student.

The needs of Canadian industry for men with post-graduate degrees have been very limited in the past, but the situation is changing rapidly with the growth of the industry, and the majority of the large industries have active and expanding research divisions. For the undergraduate who is attracted by positions in production or sales departments, post-graduate work is often a waste of the time both of the student and of the staff, but for those who hope to work in research and development, or to take up teaching as a career, post-graduate study is invaluable.

It should be emphasized that post-graduate work is not simply an extension of the undergraduate course, but gives the student an opportunity to carry out independent work and thinking.

By Dr. J. G. BRECKENRIDGE,
Professor of Chemical Engineering.

U. of T. Engineering Society Revised Budget, 1954-55

	Budget 1945-1955	Budget 1945-1955
Sales	\$33,000.00	\$35,000.00
Gross Profit on sales	6,600.00	7,000.00
Students' Fees at \$5.00	8,875.00	9,000.00
Interest on Investments	120.00	120.00
TOTAL	15,595.00	16,120.00

OPERATING EXPENSES		
Salaries	3,050.00	3,050.00
Account	200.00	200.00
Audit	150.00	125.00
Insurance	125.00	125.00
Telephone	320.00	300.00
Office Supplies	350.00	300.00
Sundries and Postage	150.00	150.00
Depreciation Reserve	150.00	125.00
Stores Alterations	200.00	50.00
Unemployment Insurance	40.00	40.00
TOTAL	4,960.00	4,490.00

FUNCTIONS and SERVICES		
Clubs at \$1.15	3,050.00	3,050.00
Debating at 0.05	90.00	50.00
Freshman Reception	600.00	500.00
Engineers' Ball	350.00	200.00
Skule Nite	750.00	650.00
Skule At-Home	750.00	650.00
Meetings and Films	150.00	100.00
Open House	Nil	Nil
Grad Ball Subsidy	400.00	250.00
Kipling Ritual	300.00	300.00
Torontonensis	350.00	350.00
Photographs	225.00	185.00
Publications	2,800.00	1,660.00
Elections	150.00	150.00
Scholarships and Cert.	130.00	130.00
Donations and Gold Keys	400.00	350.00
Delegates' Expenses	200.00	150.00
Entertainment of Delegates	75.00	75.00
Advertising and Publicity	150.00	100.00
Float Parade	50.00	25.00
Professional Campaigns	50.00	25.00
Christmas Party	100.00	Nil
TOTAL	\$10,860.00	\$7,630.00
FINE		\$4,000.00
GRAND TOTAL	\$15,595.00	\$16,120.00

Finding the money to pay our \$4,000.00 fine has not been easy. But, as your Treasurer, I tried to achieve a balance where the curtailment would be felt equally by the different groups. This is why the "Clubs"—Civil, Mechanical, Chemical, etc.—and "Publications"—"Toike Oike"—received the largest cuts.

Note that in the October 1st Budget, the usual \$100.00 allotted for "Freshman Reception" was increased to \$600.00 to take care of the then-known damages perpetrated by the freshmen on their tour. Careful attention to detail has allowed us to reduce this to \$500.00—still \$400.00 over last year and unfortunately an item of destruction.

To help implement this reduced budget every engineer can rescue the Engineering Society and its Faculty by supporting all Skule activities—do your part—buy a ticket for everything.

HUGH MacKENZIE



And Skule Did Score!

LACROSSE

The Lacrosse season is just about over for another year and now one can hold a post-mortem on the S.P.S. teams' achievements.

Skule did just so-so this year. It didn't burn up the league by any means, but the teams managed to hold their own against the inter-faculty opposition.

This year the teams were divided into two major divisions. S.P.S. wasn't represented in the second division. Division one was subdivided into five groups. Skule was in every group except the fourth, but this was rectified by having two teams (S.P.S. II and S.P.S. III) playing in Group two.

S.P.S.I. is third in Group one, having split their games so far. The record for them stands at two wins and two losses with two games to go. In Group two, S.P.S. II is in third place; only one loss, a tie and two wins. The other Skule teams (S.P.S. III) has the best record of any so far. They are undefeated and haven't been tied in four games. On the other side of the scale, in Group four S.P.S. IV is still trying to win a game. The fifth team has played one less than the others and they have two wins and a loss.

Skule could become a formidable lacrosse power next year if more time and effort were spent in practise sessions. As it now stands the fellows get together only for the game. If regular practices were introduced better plays and playing methods could be worked out. As it is, the spirit is there, it just needs polishing.

HOCKEY

To the uninitiated Skule's Hockey system may seem quite complicated. It is, in reality, simple and is designed to allow everyone a chance to play. The top two teams, Senior and Junior Skule, are composed of the best of the players from 3rd and 4th and 1st and 2nd years respectively. The 3rds are from 4th year, the 4ths from 3rd year and the 5ths and 6ths from 2nd and 1st year respectively. The 7ths are composed of those wishing to play and not on one of the teams.

Last year's Jennings' Trophy winner, Senior Skule, have not had a great many players out thus far. Coach Don Worth has Bob Cruise and Al Harrison from last year's forward lines and Bentham and Moore on defense with Yaeger in goal. Up from last year's Junior Skule squad are Bill Pollock and Gary and Donny "Pop Pop" Hewson.

Junior Skule has had a large turnout and coach Don Weir has had to do some fast cutting in order to meet requirements for the approaching schedule. Both of last year's goalies, Bentham and Germain have returned, as have Topping, Badowski, and Thomson on defense. Weir, Wilson and Badowski are the only returning forwards.

Some of the new faces this year are Crawley and Worthy on defense and Kearney, McHardy, Borthwick and Rennis on forward lines. If the Internationals don't make too much of a cut into this lineup, Junior Skule will be a strong contender again this year.

EAC REPORT

Treasure You—The World University Service is bringing The Treasure Van to the Campus before Christmas this year to enable you fellows to buy exotic handicrafts from the East—Carved Ivory from India, silver filigree work from Pakistan, silk scarves, all of which make grand Christmas gifts for the girl friend and female members of the family.

So drop in to the Hart House Debates room anytime between 10:00 and 6:00 from November 22-25 and pick up some choice Christmas gifts. Remember all proceeds go to help build a health centre at Poona University in India.

NFCUS

Aside from the pros and cons that the Board of Governors of our University had in mind when they refused the S.A.C. fee raise, the fact still remains that if we can't promise a 50c. per capita fee to NFCUS by January, we are no longer members in NFCUS; which in all probability would sound the death knell for NFCUS. Even though some may believe that such a move is long overdue anyhow, due to the past record of NFCUS, I believe that this year NFCUS is definitely pointed towards a constructive program.

The Engineering Society is the only student organization on Campus that has formally opposed U. of T's membership in NFCUS. If NFCUS can come up with a better voting average this year, I say, let's reconsider the Engineering Society's stand on the question, in the meanwhile I hope the S.A.C. can come up with the 50c. so NFCUS can have another chance.

Red Feather and Flood Relief Campaigns

Our Society came up with a tremendous showing in both the campaigns with the largest single contribution of any organization on Campus.

Let's keep up the good school spirit in all the campaigns—share in February, and the Blood donations later on.

—K. G. Singh.

PESSIMISM

—and Modern Prose

By PETE McDERRICK

Scene: Casual meeting in a hallway between two old friends.

Clyde says—Hello Doug! Say I heard about your Dad getting you that sporty Jaguar for Halloween.

—Yes, trying isn't it. The striped ash-tray is too small. Oh why do these things happen to me? My life is a farce! Nothing works out.

—Here comes that luscious doll Shirley who's after you. She was Miss Cheerleader last year.

—Curses! More affliction!

—Hi Doug! I've been looking all over for you Saturday night eh?

—Stop squeezing my hand, you're cutting off circulation—About Saturday, I've sort of promised Betty and Doreen, but maybe in a couple of weeks....

—O.K. Doug, I'll be dreaming. (Exit.)

—Ugh, never any peace (peace). But I'm already reconciled to my miserable existence. Ha, Ha—unjust gods! Shower down your torrents of misfortune; what care I? I bravely wade through this sad mire of life awaiting the end.

—Aw heck, don't worry, things'll come out.

—(Sob) I got 98 on the Calculus exam—I'm finished.

How could I have messed up the paper as badly?

—And to top it all, the only scholarship I'm getting this year is the \$1200! At a time like this when my allowance has been cut to \$40 a week. Ah me!

—I see what you mean Doug. I kinda feel like a heel—me, passing all my tests, being elected as the class rep, getting all the breaks, and you—not even complaining!

(Exit Clyde)

That Clyde's a clod! Doesn't even see through my respectable plan of gaining sympathy! But tonight—well! Where's the phone? Hello Shirley? Coming to the ball? You are? Stop calling me Tony! O.K. I'll see you tonight with bells on. Two will be enough.

Eadem Noctem:

Clyde is thinking.

—Poor, dear Doug, probably at home crying his eyes out at his tough luck. No, I remember now, he promised to go to the party tonight to cheer up the other kids. Think of that! And me, selfishly staying at home, weaving my new suit, when I could be helping my pal. Such devotion to mankind! I'll walk down to the party anyway; maybe I'll pick up a few twigs on the ground to light a fire here in the tent! No! There am, selfish again! I must learn to be as noble as Doug....

That night: — Shirley: "Stop swinging on the chandelier Doug, and put down that punch bowl."

Doug: "Pipe down! Your spoiling my fun. Here take this crowbar. We're going to knock that there wall down to make more room for dancing!" YIPPEE!Oops, here's that doughhead! Greetings Clyde, Tis the old infirmity. Even my closest friends pull me to work, remodeling their houses—O, infamous Fortune! You are my Henlock!"

Clyde: "Maybe if I wrote your Thesis for you, you'd feel less wretched."

Doug: "Thank you, dear friend; it's small consolation, but it's appreciated."

The obvious moral of this damn story is "A penny saved is a penny earned."

SPORTOIKE

By Dave Shiels

Don't look now but the football season is just about over. Just one week to Grey Cup time. At this time of year for some strange reason most skulemen begin to forget about athletics. It's almost as if there weren't enough around here.

We all go to the intercollegiate football games but how many of us attend hockey games and athletic nights in the winter? The answer lies in the fact that profits from football pay the shot for all other university athletics. Football is the only money maker. This year crowds should be better at both basketball and hockey fests because both teams are stronger than last year.

On the hockey front ex-Marlboros Rave Reid and Dave Jackson (Skulemen of course) join together on the first line to give the Blues the best line in intercollegiate hockey. A big loss from last year is the goalie, Jack Rosse. Hugh Curry is up from the intermediates to replace him. Other Skulemen who are returning to duty are Done Cossar and Johnny Akitt. This team is much better than last year and should draw bigger crowds than last year. Their only game to date resulted in a 2-2 tie with the Marlboros of Junior OHA fame. At that time the team had only been on skates a week.

Over on the hardwood floor at Hart House, the basketballers have been working out for some time. This is the team to take the title. Look at this roster! Returning of course are such stars as George Stulac and Steve Oneschuck from last year's team. Johnny Braithwaite from Tri-Bells is again playing for old T.O. Don Fawcett, who has been coaching McMaster intermediates for two years, is back to win all-star rating. Ex Tri-Bells Leo Madden and Pete Potter are working out with the team. Let's hope they stay in college ball. You can expect to see a lot of last year's team down to Intermediate.

Got a question! With all the engineers on football, hockey and other teams, why are there none on the inter-collegiate basketball team?

The Large or the Small Organization?

From: A Professional Guide for Junior Engineers

By: Wm. E. Wickenden, Edited by G. Ross Henninger.

In general the pros and cons are surprisingly even. The big organization has a wider diversity of jobs, but may expect closer specialization; the top of the ladder is higher, but early progress is likely to be more routine and less individual; a man can gain a wide variety of experience without leaving its ranks but it is likely to have many centers of activity and to shift men around without too much regard for their personal taste or convenience; it can use a wider variety of talents, but its very size entails more standardization of rank and salary; its policies must be stable and far sighted, but the individual engineer may have little part in shaping them. The large concern may be less nimble than its smaller competitor in adopting new ideas, but the wide diversity of its production and activities is better insurance against depression and superseded inventions.

Research is now both a power tool of progress and of insurance against being put out of business, but only the large concern can carry it on extensively. On the other hand, an ingenious and inventive individual usually can make more of an impression on a smaller concern. An organization of intermediate size may, in many instances, offer the more important advantages and avoid the major disadvantages of either the very large or the very small one, such as better contact with supervisors than in the very large concern and better diversity of activity in the small concern.

The next meeting of the Engineering Society will be held at 5:00 p.m., Tuesday, Nov. 23, in the Faculty Council Room of the Mining Building.

Make A Date for FRIDAY, NOVEMBER 26

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